**Christmas Maths Codebreaker 3 - Answers**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | D | E | F | G | H | I | J | K | L | M |
| 12 | 2.5 | 6 | 48 | 4.5 | 120 | 50 | 20 | 9 | 40 | 8 | 100 | 60 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 10 | 750 | 150 | 45 | 200 | 30 | 3.5 | 210 | 64 | 25 | 36 | 5 | 75 |

Answer the Christmas questions below, link your answers to the table above to reveal why Santa had to clean the cooker after making Christmas tree soup:

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| --- | --- | --- | --- | --- |
| I have my cards pinned to a piece of string with the equation . One card has the co-ordinate 25. What’s its co-ordinate? | I have some algebra crackers that have an equation instead of a joke. I have this one to solve: | I am enlarging a photo for a friend for a present. The original is 8cm wide, the enlargement is 20cm wide. What is the scale factor? | I have a dining table with total interior angles 1800ᵒ. How many sides has it got? | My spending on presents went up by 30% this year. I spent £273 this year, how much did I spend last year? |
|  |  |  |  |  |
| I | T | B | A | U |
|  |  |  |  |  |
| I have put a “Happy Christmas” banner on my co-ordinate grid wall. The ends are at and . What is the gradient of my banner? | The area () of wrapping paper is directly proportional to the square of the dimensions () of a present. When , . What is when ? | I have tinsel forming the curve with the mantelpiece as the axis. The tinsel meets the mantelpiece at and where else? | I have £120 to spend on presents for 3 friends Rob, Sarah and Tara in the ratio 5:1:4. How much am I spending on Tara? | My local electrical store has a sale with 45% off all stock. I picked up a new TV for £412.50 in the sale. How much is it full price? |
|  |  |  |  |  |
| B | L | E | D | O |
|  |  |  |  |  |
| My Christmas pudding’s volume () is directly proportional to the cube of its radius (). when . What is when ? | Two boxes of crackers and four boxes of mince pies cost £19. Three boxes of crackers and five boxes of mince pies cost £26. How much is one box of crackers? | A recipe for festive punch for 6 people requires 150ml of orange juice. I need enough for 8 people so how much orange juice do I need? |  |  |
|  |  |  |  |  |
| V | E | R |  |  |